

## PATENT COOPERATION TREATY

From the  
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

To:  
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CASE # 49704PCT ACTION Proprietary (Cr.)  
REMINDER 2/24/04 DUE DATE 2/24/04  
DEADLINE

Applicant's or agent's file reference

49704P/A599

International application No.

PCT/US03/05133

International filing date (day/month/year)

21 February 2003 (21.02.2003)

Priority date (day/month/year)

22 February 2002 (22.02.2002)

International Patent Classification (IPC) or both national classification and IPC

IPC(7): H01P 1/203 and US Cl.: 156/250; 29/830; 156/306.9

Applicant

ARIZONA BOARD OF REGENTS

Date of Mailing  
(day/month/year)

24 DEC 2003

REPLY DUE

within 2 months/days from  
the above date of mailing1. This written opinion is the first (first, etc.) drawn by this International Preliminary Examining Authority.

2. This opinion contains indications relating to the following items:

- I  Basis of the opinion
- II  Priority
- III  Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV  Lack of unity of invention
- V  Reasoned statement under Rule 66.2 (a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI  Certain documents cited
- VII  Certain defects in the international application
- VIII  Certain observations on the international application

3. The applicant is hereby invited to reply to this opinion.

When? See the time limit indicated above. The applicant may, before the expiration of that time limit, request this Authority to grant an extension. See rule 66.2(d).

How? By submitting a written reply, accompanied, where appropriate, by amendments, according to Rule 66.3. For the form and the language of the amendments, see Rules 66.8 and 66.9.

Also For an additional opportunity to submit amendments, see Rule 66.4.

For the examiner's obligation to consider amendments and/or arguments, see Rule 66.4 bis.

For an informal communication with the examiner, see Rule 66.6

If no reply is filed, the international preliminary examination report will be established on the basis of this opinion.

4. The final date by which the international preliminary examination report must be established according to Rule 69.2 is: 22 June 2004 (22.06.2004).

Name and mailing address of the IPEA/US

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Commissioner for Patents  
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Alexandria, Virginia 22313-1450

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Authorized officer

Hsien Ming Lee

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**I. Basis of the opinion**

## 1. With regard to the elements of the international application:\*

the international application as originally filed  
 the description:

pages 1-7 \_\_\_\_\_, as originally filed  
 pages NONE \_\_\_\_\_, filed with the demand  
 pages NONE \_\_\_\_\_, filed with the letter of \_\_\_\_\_.

the claims:

pages 8-11 \_\_\_\_\_, as originally filed  
 pages NONE \_\_\_\_\_, as amended (together with any statement) under Article 19  
 pages NONE \_\_\_\_\_, filed with the demand  
 pages NONE \_\_\_\_\_, filed with the letter of \_\_\_\_\_.

the drawings:

pages 1-5 \_\_\_\_\_, as originally filed  
 pages NONE \_\_\_\_\_, filed with the demand  
 pages NONE \_\_\_\_\_, filed with the letter of \_\_\_\_\_.

the sequence listing part of the description:

pages NONE \_\_\_\_\_, as originally filed  
 pages NONE \_\_\_\_\_, filed with the demand  
 pages NONE \_\_\_\_\_, filed with the letter of \_\_\_\_\_.

## 2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language \_\_\_\_\_ which is:

the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).  
 the language of publication of the international application (under Rule 48.3(b)).  
 the language of the translation furnished for the purposes of international preliminary examination (under Rules 55.2 and/or 55.3).

## 3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the written opinion was drawn on the basis of the sequence listing:

contained in the international application in printed form.  
 filed together with the international application in computer readable form.  
 furnished subsequently to this Authority in written form.  
 furnished subsequently to this Authority in computer readable form.  
 The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.  
 The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4.  The amendments have resulted in the cancellation of:

the description, pages NONE \_\_\_\_\_  
 the claims, Nos. NONE \_\_\_\_\_  
 the drawings, sheets/fig NONE \_\_\_\_\_

5.  This opinion has been drawn as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

\* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this opinion as "originally filed."

WRITTEN OPINION

International Application No.  
PCT/US 0133

**Supplemental Box**

(To be used when the space in any of the preceding boxes is not sufficient)

**TIME LIMIT:**

The time limit set for response to a Written Opinion may not be extended. 37 CFR 1.484(d). Any response received after the expiration of the time limit set in the Written Opinion will not be considered in preparing the International Preliminary Examination Report.

**V. Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement****1. STATEMENT**

Novelty (N)	Claims 1-30	YES
	Claims NONE	NO
Inventive Step (IS)	Claims NONE	YES
	Claims 1-30	NO
Industrial Applicability (IA)	Claims 1-30	YES
	Claims NONE	NO

**2. CITATIONS AND EXPLANATIONS**

Claims 1-10 and 12-30 lack an inventive step under PCT Article 33(3) as being obvious over Abraham (US 6,014,386) in view of Fukushima et al. (US 6,045,893). Abraham teaches a transformer, which inherently comprises at least a pair of metallic spirals, capable of receiving an input signal; and a capacitor capable of receiving the input signal. Abraham differs from the claimed invention by providing high pass filtering in the transformer and low pass filtering in the capacitor. Fukushima is cited to teach that the high pass filtering is included in the transformer and the low pass filtering is included in the capacitor. It would have been obvious to one of the ordinary skill in the art at the time the invention was made to provide the device of Abraham having high and low pass filtering in view of the teachings of Fukushima et al. to provide a satisfactory band pass filter formed on an integrated circuit.

Claim 11 lacks an inventive step under PCT Article 33(3) as being obvious over Harda (US 5,949,299). Abraham teaches a transformer capable of receiving an input signal; and a capacitor capable of receiving the input signal. Abraham differs from the claimed invention by the IC chip comprising a silicon substrate. Harda teaches that the substrate is silicon. It would have been obvious to one of the ordinary skill in the art at the time the invention was made to provide the device of Abraham having silicon substrate as taught by Harda so that the device can be integrated with the IC component.

Claims 1-30 meet the criteria for industrial applicability set out in PCT Article 33(4), because the claimed subject matter is useful in the industry.

----- NEW CITATIONS -----  
NONE